

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-III (NEW) EXAMINATION – WINTER 2021****Subject Code:3130403****Date:17-02-2022****Subject Name:Basic Biochemistry and Calculations****Time:10:30 AM TO 01:00 PM****Total Marks:70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

	Marks
Q.1 (a) What are the monosaccharides?	03
(b) Give the basics of anabolism of glycogen.	04
(c) Discuss the Urey Miller's experiment.	07
Q.2 (a) Give classification of carbohydrates.	03
(b) Explain features of turns and loops in protein structure.	04
(c) Explain the fate of proteins in human digestive track.	07
OR	
(c) Explain in detail the Urea cycle.	07
Q.3 (a) What are the glycol-conjugate?	03
(b) Enlist the properties of water.	04
(c) Explain fate of pyruvate under different conditions.	07
OR	
Q.3 (a) Define pH. How do buffer work?	03
(b) Give the major reactions of pentose phosphate pathway.	04
(c) Explain beta oxidation of saturated fatty acid.	07
Q.4 (a) Define nucleoproteins.	03
(b) Discuss the size of DNA molecules.	04
(c) Differentiate between A, B and Z forms of DNA.	07
OR	
Q.4 (a) What is Von-gierke disease? Is that because of metabolism?	03
(b) Write down the structure of nucleosides.	04
(c) Discuss the importance of nucleotides.	07
Q.5 (a) Give two names of aromatic amino acid and draw the structure of any one of them.	03
(b) Explain that peptide group assume planar configuration.	04
(c) Discuss the types of lipids.	07
OR	
Q.5 (a) What are ketone bodies?	03
(b) Explain function of lipoproteins.	04
(c) How are the lipids synthesized?	07
